SCHOOL OF PUBLIC HEALTH

COLLEGE OF MEDICINE AND HEALTH SCIENCES

UNIVERSITY OF GONDAR

ASSESSEMENT OF FACTORS AFFECTING UNDER FIVE MORTALITY: THE CASE OF GONDAR ZURIA WOREDA, AMHARA REGION, NORTH WEST ETHIOPIA.

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ASSESSEMENT OF MAGNITUDE AND FACTORS AFFECTING UNDER FIVE MORTALITY: THE CASE OF GONDAR ZURIA WOREDA, AMHARA REGION, NORTH WEST ETHIOPIA

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Acronyms

AARR= Average annual reduction rate

ANC = Antenatal care

ANRS= Amhara National Regional State

EC= Ethiopian Calendar

ETH BIRR= Ethiopian Birr

HH=Household

IMR=Infant Mortality rate

MDG= Millennium Development Goals.

MOH= Ministry of Health.

PHC=Primary health care

PNC =Post Natal care

RH= Reproductive Health

SPSS=Statistical Package for Social Science

U5MR= Under five mortality rate

UNICEF= United Nation Children Education Fund.

WHO= World Health Organization.

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Abstract

Background: Infant and child death in developing countries constitute the largest age category of mortality. Sub-Saharan Africa's under-five mortality rate is 75 percent greater than other regions in the world. With 10% of the world's population Africa provides 20 percent of the world's live births and 41 percent of under-five deaths: the Amhara Regional State is one of those areas in Ethiopia with highest U5 mortality (154 per 1000 live births) which is greater than the national average 123 per 1000 live birth. Therefore; this paper has tried to identify the determinant factors that affect under five mortality in the study area.

Objective: Assessment of the magnitude and determinant factors of under five mortality in Gondar Zuria Woreda.

Method: A community based cross- sectional quantitative study was conducted from April to June 2011

Results: A total of 810 households (97.6%) participated in the study. The total number of children born in the previous 5 years among these households was 1290, consisted of 667 males (51.7%) and 623(48.3%) females of under five children. The total number of deaths in these study subjects was 167(12.95%). Main causes of deaths affecting these children were malaria 48(28.74%), diarrhea 45(26.94%), respiratory infections 22(13.17%), pneumonia 18(10.78%) and others 34(20.36%) were due to HIV/AIDS, TB, car and fire accidents etc. From the total deaths (167), the highest numbers, 78(16.16%) out of 469 were reported from the children between 0-1 year and the rest 89(11%) out of 821 were greater than one year. In this study, mother's education was found to be an independent factor associated with under five mortality. Children born to mothers who were illiterate were 6.16 times more likely to have under five death compared to mothers whose educational status was secondary and above [AOR: 6.16, 95% CI (2.21, 17.19)].

Conclusion and recommendation: Compared to Ethiopian demographic health survey 2005, under five mortality has shown a slight decrement in

the study area, but increased compared to 2011 EDHS(88 per 1000 live births). Promoting the health education of mothers on low-cost health measures like birth-spacing, breastfeeding, child immunization, safe weaning, proper feeding during and after a child's illness, oral rehydration therapy, and domestic hygiene are important to save the lives of many children.

1. Introduction

1.1 Statement of the problem

Considerable progress has been made over the past several decades in lowering infant and child mortality. Even though there are improvements in medicine and medical knowledge, which have lead to unprecedented mortality decline in the developed and in many parts of the developing world, Child survival still remains a formidable challenge in many parts of Africa (1).

Worldwide, between 1980 and 2000, under-five mortality declined from 15 million to 10.8 million deaths per year, 4.5 million of which occurred annually in Africa. Under five mortality rate of over l00 per 1 000 live births still occurs in 60 developing countries, 35 of which are in Sub Saharan Africa. Mortality rates in the Asia/Near East and Latin America/Caribbean regions declined by 41 and 55 percent respectively, yet in Africa the mortality rate decreased by only 10 percent (2, 3).

Thus, Africa contributes 4.6 million deaths to the worldwide figure of 10.9 million deaths. Of the 40 countries worldwide with the highest child mortality rates, 33 Countries are in sub-Saharan Africa. Among the Sub-Saharan countries Nigeria, Democratic Republic of the Congo, Ethiopia, and Tanzania account for close to half (45 percent) of all child deaths in Africa. But Sierra Leone, Niger, and Angola have the highest under-five mortality rates in the world. In these countries approximately 25 percent of children die before reaching the age of five. It is also true that the average under-five death rate in Africa is 174 deaths per 1,000 live births, 25 times the rate in the United States (3).

In Africa, 1 in 3 mothers will experience the death of a newborn, whereas less than 1 in 100 mothers will do so in North America. Neonatal deaths contribute to almost half of infant mortality, stayed the same over the past 12 years in sub-Saharan Africa ,35 to 55 percent of all Infant mortality rates (IMR). The root of

infant mortality is the uneven distribution of resources or lack of resources. Each year, approximately four million infants die worldwide before completing the first 28 days of their life. This translates into seven newborn lives lost every minute or 10,000 every day. Nearly five million neonates die each year in the world of which 96 per cent are in the developing counties. Almost all (98 per cent) of these deaths occur in developing countries and most are caused by infectious disease (4, 5).

Child health is closely related to maternal health, as nutrition during pregnancy, birth conditions, birth spacing, and health status of the mother impact the health of the child prior to, during and after birth. Largely because of these factors, 3 million infants are stillborn each year (6).

Therefore, Mortality among children under five years of age has become the burning issue of the day and has received renewed attention as a part of the United Nation's Millennium Development Goals (MDG). The fourth goal of MDG is to reduce under-five mortality by two thirds between 1990 and 2015. That is from 93 children of every 1,000 dying before age five in 1990 to 31 of every 1,000 in 2015 (3,6). To achieve the MDG goal countries with current U5MR > 40 deaths/1000 and AARR <1% should reduce child mortality annually in greater than 4%. But currently some regions in the world are in insufficient progress since their mortality rate is greater than 40 and the AARR is between 1.0–4.0% and most Sub Saharan African countries have made no progress which means that the death rates were greater than 40 per 1,000 and AARR was less than 1% (3).

In Ethiopia, under five mortality rates decreased from 204 per 1000 live births in 1990 to123 per 1000 live births in 2004/5 and it further reduced to 101 per 1000 live births in 2009/10. The progress is not sufficient to achieve the goal. The above figure shows that Ethiopia is not on track to achieve MDG 4 since its U5MR> 40 deaths/1000 live births. The MDG 4 target of the country was to reduce the under five mortality to 68 per 1000 live births by 2015 (4). Therefore, it would not be easy for Ethiopia to accomplish its mission. Therefore, this paper

has tried to identify those limiting factors for the better achievement of the MDG 4.

1.2 Literature Review

1.2.1 Magnitude of Under Five Mortality

Annually there are 9.7 million deaths of children younger than five years of age, and 50% of that count is reported to be from 68 countries, mainly in sub-Saharan Africa, East Asia, and South America. A child born in a developing country today is over 13 times more likely to die within the first five years of life than a child born in an industrialized nation (7).

The high levels of mortality of children in Bolivia, both in rural and urban areas, reflect the high risk of exposure to both disease and malnutrition for infants and children. There is also limited access to appropriate medical and health care facilities, limited supply of health related services especially in rural areas. The length of breastfeeding is also one of the most important factors affecting infant mortality. Infants who did not breastfeed are 36 times more likely to die before their second birthday, and infants who breastfed beyond 18 months are less likely to die before their second birthday than infants who breastfed less than 12 months (8).

In the four countries ,Nigeria, Democratic Republic of the Congo, Ethiopia, and Tanzania, under-five deaths exceed 200,000 per year, accounting for 45 percent of the total number of these deaths in sub-Saharan Africa(3). A study in Nigeria, show that children of women with some primary schooling and those with post-primary schooling experience mortality levels which are less than 40% and 68% respectively of the level experienced by children of women with no schooling. More importantly, father's schooling, yields a weaker effect than mother's schooling. The study concludes that the impact of maternal education: reduces mothers' fatalism about illness and hence raises their willingness to adopt more effective child health care practices. It enhances a mother's ability to manipulate

modern medical facilities and. It increases her devotion of more resources to child welfare (2).

In another study maternal schooling 4-6 years duration is associated with a fall in infant mortality of about 20%. But in Latin America, the fall ranges 30 to 58% in early childhood and 43 to 73% in later childhood (9). More educated mothers may have healthier children because they have better knowledge about health care and nutrition, have healthier behavior and provide more sanitary and safe environment for their children (10).

Out of the total child population of Uganda (estimated 17 million in 2009), 65% are vulnerable due to multiple factors including poverty, insecurity, diseases and conflicts. Child and newborn survival are linked to maternal health and nutrition: if a mother dies during child birth, the risk of a newborn dying was three to ten times higher for children under five (11).

In 2000 the United Nations established a set of high priority goals to address global problems of poverty and health, goal 4 aims to reduce by two thirds, between 2000 and 2015, the under-five mortality rate in developing countries. In sub-Saharan Africa from 2000 to 2006 these rates have only been reduced from 167 per 1,000 live births to 157, and 27 nations in this region have made no progress towards the Goal(12).

If we consider decline of U5 mortality rates between 1990 and 2000, Africa has shown the least decline 3% compared with 32% decline in industrialized countries. Africa has also the highest rate of infant mortality rate in the world (106 per 1000 live birth) where as industrialized countries have the lowest IMM rate (5 per 1000 live birth)(2).

2.2 Determinants of Under Five Mortality

Child survival is connected to poverty at the family and community level, and poverty in communities is strongly associated with a government's distribution of political power, investments in health and social sectors, health system policies and structure, and geographic and economic accessibility of health services. The poorest children tend to have higher exposure to disease, lower coverage of preventive and curative interventions, (13).

The mother's work status also determines the amount of time and care a mother can give to her child, and it may determine the amount of resources (income) available to the mother and thus her access to various goods and services. Maternal age at birth is also an important variable; higher infant mortality is expected for children of young mother (14).

Communicable diseases such as diarrhea, pneumonia, malaria, and measles have greatly contributed to high under-five mortality and are strongly associated with nutrition deficiency in developing countries. Vitamin A and zinc deficiencies lead to disease burdens among children. Mothers and children are the most susceptible to under nutrition in the most critical places (including India and sub-Saharan Africa (15, 16).

A review of literature suggests that a wide variety of factors; (e.g. birth weight, birth defects), demographic (e.g. mothers age, birth order), and socio-economic (e.g. factors relating to parental background, community, nutrition, access to and utilization of health facilities etc.) are the main determinant factors responsible to infant and child mortality. Preceding birth interval where previous infant died, mother's education, father's occupation, mothers' rural urban residence, mothers working status since marriage are other factors that affect child survival (17).

One in three deaths in the world is the death of an under five year old, and most occur in the developing world. Maternal education can be thought of as influencing child health and survival through better health care practices, hygiene, preventive care and treatment, the allocation of more resources to child care, use of appropriate weaning foods, timely visits to prenatal clinics, optimal birth spacing, and maintenance of home hygiene. Women from low income

households, relative to those from high income ones, may be exposed to greater risk of child death due to their own poor nutritional status and rapid childbearing, raising children in less sanitary environments and possessing more limited capacity to provide adequate nutrition to their children or to exploit available medical services in the event of a child's illness (18).

Child health is closely related to maternal health, as nutrition during pregnancy, birth conditions, birth spacing, and health status of the mother impact the health of the child prior to, during and after birth. Largely because of these factors, 3 million infants are stillborn each year (6).

1.3 Justification

Every year 9.7million children die before their fifth birth day worldwide. Nearly all of them (99%) are in 60 developing countries. India, China, Democratic republic Congo, Pakistan, Nigeria and Ethiopia account for more than 50% of the deaths. Countries are said to be on track if: U5M is<40 per 1000 live births, or U5M > 40 per 1000 live births and annual average drop is $\geq$4%. But global progress was insufficient (1.6% annual reduction) and of the 68 priority Countries, only 16 are on track. North Africa is on track (5.3% annual reduction), but Sub Saharan Africa is not on track (< 1% annual reduction).

The Amhara region is one of those areas in Ethiopia with the highest U5M (154 per 1000 live births) which is greater than the national average (123 per 1000 live births). Up to my knowledge is concerned; no research is done in the study area that shows the magnitude of the problem. Therefore, assessing the factors of under five mortality was useful to design interventions that help to decrease the burden of the problem and to improve child health in the district as well as in the region.

2. Objectives

2.1 General Objective

Assessment of the magnitude and factors affecting under five mortality in Gondar Zuria Woreda, North West Ethiopia.

2.2 Specific Objectives

- To determine the magnitude of under five mortality in the study area.
- To identify factors of under five mortality in the study area.

3. Methods and Materials

3.1 Study design and period

A community based cross- sectional quantitative study was conducted from April - June 2011.

3.2 Study area

Was Gondar Zuria Woreda, one of the 160 Woreda's of Amhara National Regional State, located in North Gondar Zone about 708 Km from Addis Ababa, 140 Km from Bahir Dar and 40 Km from Gondar. It covers an area of 10828Km^2. It shares boundaries with Lake Tana, Gondar town, Dembia, West Belesa, and Libo Kemikem weredas. Administratively the district is divided into 38 Kebeles (three urban and 35 rural). According to the information obtained from the district administration and health office, the total population of the district in 2010 was about 201,277; of which 177,123 (88 %) accounts for the rural population (19).

At the time of survey, there were 2 health extension workers in each kebele,75 all types of schools, 6 health centers and 35 health posts, 228 protected water sources which comprises 230 hand pumps, 52 protected springs and 6 motorized pumps which account for 56 % safe water coverage of the district. The Altitude of the district ranges 2100 to 2850m above mean sea level. Climatic Zones are Dega and Weynadega, with only one rainy season, usually June to August with an average annual rain fall of 900-1400mm and its mean temperature was 23-24 ^{o}C(20).

3.3 Source population

The source population: All under five Children (dead or alive) who lived in the District since birth or residing in the area at least for six months were considered as the source population.

3.4 The study population: All under five children (dead or alive) living in urban and rural area of the selected kebeles.

Inclusion criteria: All under five alive or dead children whose mothers/care takers who were not seriously ill.

Exclusion criteria: All under five alive or dead children whose mothers/ care takers who were seriously ill, or who were unable to hear and also if they are not volunteer would be excluded.

3.5. Sample Size Determination

Sample size (n) was determined using the formula for single population proportion. According to EDHS 2005 prevalence of under five deaths in the Amhara region was 154 per 1000 live births. So the Prevalence was 15.4%, Confidence level of 95%, degree of precision was 2.89%.

The formula used to calculate the sample size was as follows:

$$\frac{(Z_{\alpha/2})^2(p(1-p))}{d^2} = \frac{(1.96)^2(0.154(1-0.154))}{(0.0289)^2} = 599.25\ (600)$$

Where:

p = the prevalence of U5 mortality (=15.4%)

$Z_{\alpha/2}$ **= the confidence level of 95% (1.96)**

d = the degree of precision (2.89%)

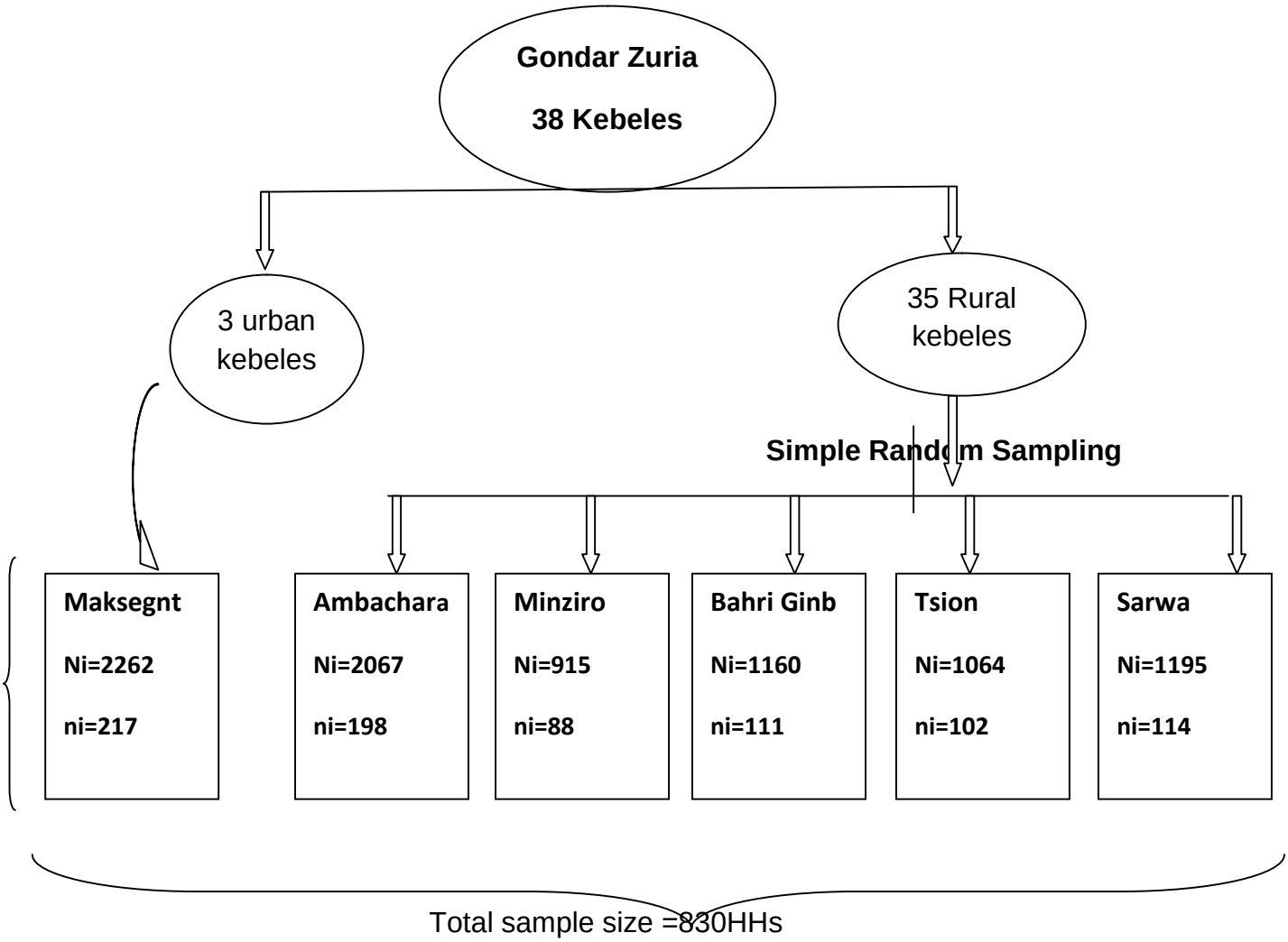
Multiplying by 2 for design effect and 10% non response rate, the final sample size was **1320 children**. But from the maximum sample size, the expected number of deaths was 203 per 1320 live births.

3.6 Sampling procedure

In the study area, of the total population 88% lives in the rural area. To get a representative sample 81% of the respondents were selected from these areas. The remaining 19% households were selected from urban residents. Due to time and resource constraints among 35 rural Kebeles, five rural Kebeles and one urban Kebele were randomly selected, and then respondents in each

sampled kebeles were selected by systematic random sampling at regular interval (every Kth) from the sampling frame. The first unit to be selected was taken at random from among the first K units. A systematic sample was selected from Kebele 1(rural), 2067 households. The sample size was decided to be 200. The sampling fraction was 200/2067=1/10, hence the sample interval was 10. The number of the first household included in the sample was chosen randomly, blindly picking one out of ten pieces of paper, numbered 1-10. The samples included in the study in each kebele were selected using this same procedure.

Schematic representation of sampling procedure



Where N= Total number of households in six Kebeles (8663)

Ni=Total number of households in each Kebele

$ni = \frac{Ni \times n}{N}$ n= Total sample size to be selected in five rural and one urban kebele(830 Households)

ni=sample size drawn from each kebele.

According to 2007 Population and Housing Census of Ethiopia (results for Amhara region), there were approximately one and half children aged under five in a house. So to get the required sample size, a total 830 of households were

included in the study. After selecting the households using systematic random sampling, all under five children in a household were included in the study.

3.7 Study variables

Dependant variable: Under five mortality

Independent variables

- **Socio- economic and demographic characteristics** such as age of mothers, marital status, occupation of parents, educational status of parents, Income, , family size, residence, place of birth, religion.
- **Environmental factors**: Includes Safe water supply, latrine facility, and housing condition
- **Behavioral factors**: include feeding practices of children, duration of breast-feeding, vaccination status, use of health care facilities, hand washing practice.

3.8 Operational definition

- **Under five mortality:** the death of a child before five years of age. Here the cause for the death of child was determined by asking mothers/caregivers the signs and symptoms of the disease. Under five mortality for a year was calculated as the number of deaths of children zero to four years old divided by average (middle year) population of the same age group of live births of the year multiplied by the usual factor 1000.

3.9 Data Collection procedures

A structured questionnaire was used to collect data on the households' socio-demographic, environmental conditions and hygienic practices (behavior) of mothers/caretakers. Sickness of under-five children two weeks prior to the survey was made. The data collection tool was first prepared in English and then

translated into Amharic, and finally it was retranslated back into English by independent professionals.

Data collectors and supervisors recruitment

Two supervisors and six clinical nurses were involved for data collection.

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Fieldwork Procedure

Data of the household survey was collected concurrently in each study site, and observation was made by the data collectors. Supervisor evaluates daily performance of the data collectors to improve the performance in the next day.

3.10. Quality assurance

Data collectors and supervisors were trained together three days prior to the starting of fieldwork. They were trained on how to approach households during the study; how to record or collect data; on how to control missing data, and on how to communicate with supervisor for two days.

Supervision

First, the recruited supervisor discussed with the principal investigator on supervising the data collectors so as to reassure that the data collection activities were carried out according to the training manual and guide line. Accordingly, the supervisor monitored the data collectors assigned to him using supervisory check list on daily basis and corrective measures were taken immediately.

Translating and Pre-testing of questionnaire

The questionnaire was prepared originally in English, then translated to Amharic and retranslated back to English by independent public health professionals to maintain the consistency of the contents of the instrument. The questionnaire was administered in Amharic since the subjects of the study were Amharic speakers. Due to the uncertainty of questionnaire design and the manner in which respondents react to a particular questionnaire, pre-test was done before

the actual data collection is launched. The result of the pre-test was used to correct some unclear ideas and statements, vague terms, phrases and questions identified during the pretest could be modified and changed. Missing responses like "No response" and "Others" could be added, and skipping patterns was also corrected.

The data entered was checked for its consistency. Frequencies and cross tabulations were used to check for missed values and variables. Finally, errors identified were corrected after revising the original questionnaire.

The pre-testing of the questionnaire was conducted on 42 households (5% of the total estimated sample size) by the trained recruited data collectors having intact monitoring of the work by supervisor assigned.

Quality control

The response of the households was checked by the supervisors and the principal investigator by randomly selecting 10% of the households visited by the fieldworkers. Furthermore, the supervisors checked everything recorded by fieldworkers in each questionnaire on daily basis having an objective of ensuring no data were missed, and data were precise and accurate. On the other hand, fieldworkers themselves were checked for internal consistency that was the extent to which the responses on different questions correlate each other during interviewing each recruited household so that they reconfirmed the response of the interviewees.

3.11 Data Processing and Analysis

The completed questionnaires were categorized into urban and rural areas. The data entry and cleaning were performed using EPI Info version 6 statistical package.

The strength of association between variables was determined using odds ratio, with 95% confidence interval obtained from binary logistic regression analysis

using SPSS for window version 16 software package to assess the relative effect of selected explanatory variables on the outcome variable. The final (multivariate analysis) model was ran by selecting only those that appeared to be statistically significant ($P<0.05$) in the bivariate analysis and reported as the result of this study.

3.12 Ethical consideration

Ethical approval was obtained from Institutional Review Board of School of Public Health, University of Gondar. Permission was also secured from the district health office and administration of selected Kebeles. Prior to the interview and inspection of households, data collectors were taken informed verbal consent from the study participants. Each respondent was informed about the objective of the study and confidentiality was assured. The right to withdraw any time from the process when their feelings were uncomfortable was properly informed.

4. Results

4.1. Socio-demographic characteristic of respondents

A total of 830 households were included in this study giving the response rate 97.6% (810HHs). In this study, the number of household's was equivalent to the number of respondents. Since the respondents' response was used more than once due the number of children in a house, the total number of respondents would be 1290. Out of these respondents, 245 (19%) were from urban area (Maksegnit Town), while 1045 (81%) from rural areas. Four hundred ninety six (38.4%) of the mothers/caregivers were less than twenty years of age, 703(54.5%) were between 20-35 years and 91(7.1%) were between 36-49 years old. The majority of mothers 1158 (89.8%) were married and Orthodox Christian by religion 1167(90.5%). Seven hundred twenty one (55.9%) mothers were illiterate, among these 638(49.5%) were rural and 83 (6.43%) urban. Of the 387(30%) mothers who had primary education, 296(22.95%) were rural and 91(7.05%) urban. According to occupational status, the majority of mothers 1120(86.8%) were housewives. Ninety four (7.3%) were government employed (urban mothers). The average monthly income of a HH was 1357.27($\pm$785.44) Birr per households. The majority of households, 755 (58.53%) earn less than the average monthly income of the study area (Table 1).

Table 1 The distribution of Socio-economic and demographic variable, Gondar Zuria Woreda (Maksegnit), September, 2011

Variables		Number	Percent
Residence	Urban	245	19%
	Rural	1045	81%
Religion:	Christian	1168	90.54%
	Muslim	142	9.46%
Education of mother			
	-Illiterate	721	55.89%
	- Primary	367	28.45%
	-secondary+	182	14.11%
Mother' age at birth (years)	<20	496	38.45%
	20-35	703	54.50%
	36-49	91	7.50%
Education of father	-Illiterate	562	43.57%
	-primary	614	47.60%
	-secondary	114	8.84%
Mother's working status	-housewife	1120	86.82%
	-government employer	94	7.29%
	-other*	76	5.89%
Father's working status	-farmer	975	75.58%
	-government employed	140	10.85%
	-merchant	175	13.57%
Marital status	Married	1158	89.77%
	Divorced/dead	132	10.23%
Deliveries in the last five years			
	One	418	32.40%
	Two	743	57.60%
	Three	129	10.00%

NB; other* means small scale business, daily laborers'

Under Five Mortality

From the total number of children born in the last five years, 167 were dead. Out of these five were from urban areas whereas 162 were from rural areas. One hundred twenty five (74.5%) of the dead children were born from illiterate mothers, 12(7.5%) were from mothers who secondary and above. Eighty two of the dead children were from mothers whose age were less than twenty years. Most of the deaths (62%) were from illiterate mothers compared with 37% which were from literate fathers (Table 2).

Table 2 Selected Socio- demographic and behavioral variables in relation to U5M in Gondar Zuria Woreda, September, 2011

Variables		Total alive children N=1123(%)	Total U5M (n= 167)
Residence	Urban	240(21.37%)	5(3%)
	Rural	883(78.63%)	162(97%)
Education of mother	-Illiterate	596(53.72%)	125(74.48%)
	- Primary	357(31.79%)	30(18%)
	-secondary+	170(15.34%)	12(7.52%)
Mother' age at birth (years)	<20	414(36.87)	82(49.1%)
	20-35	629 (56%)	74(44.31%)
	36-49	80(7.13%)	11(6.58%)
Education of father	-Illiterate	457(41%)	105(62.87%)
	Literate	666(59%)	62(37.13%)
Mother's working status	-housewife	977(87%)	143(86.28%)
	-government employer	80 (7.13%)	14(7.29%)
	-other*	66(5.87%)	10(5.89%)
Breast feeding (Year)	<1	157(14%)	65(38.92%)
	1 -2	398(35.44%)	50(29.94%)
	> 2	568(50.58%)	52(31.14%)
Vaccination status:	Full	805(71.68%)	91 (54.49%)
	Partial	221(19.68%)	49 (29.34%)
	Not at all	97(8.64%)	27 (16.17%)

NB Percentages were prepared column wise

4.2 Environmental Factors

About 190(77.55%) of the households in urban areas had latrine, this proportion rural areas was 835 (79.0%). Two hundred sixty five (20.54%) of the households did not have latrine facilities both in urban and rural areas. Considering frequency of latrine use, 73% of urban residents and 475(56.89%) of rural residents respectively use latrine always. Open field was reported as a means of refuse disposal by 77% rural and 33% of urban households respectively. All of the urban residents (100%) and 539(51.57%) rural households used water from pipes and hand pump wells, respectively. The other 437(41.82%) and 69(6.6%) rural residents used water from sources like protected spring and unprotected wells, respectively (Table 3).

Table 3 The distribution of environmental variables by residence in urban and rural communities of Gondar Zuria Woreda (Maksegnit), September, 2011

Variable	Urban (n=245) No (%)	Rural (n=1045) No (%)	Total (n=1290) No (%)
Water source			
Pipe/hand pump	245(100%)	539(51.57%)	784(60.78%)
Protected spring	0	437(41.82%)	437(33.87%)
Other *	0	69(6.6%)	69(5.35%0
Latrine availability:			
Yes	190(77.55%)	835(79.90%)	1025(79.46%)
No	55(22.45%)	210(20.10%)	265(20.54%)
Frequency of latrine use:			
Always	180(94.73%)	475(56.89%)	655(63.9%)
Sometimes	10(5.27%)	360(43.11%)	370(36.1%)
Method of refuse disposal			
Open field	81(33.06%)	805(77.03%)	886(68.68%)
Pit	70(28.57%)	130(12.44%)	200(15.50%)
Use baskets	84(34.29%)	80(7.6%)	164(12.71%)
Other **	10(4.08%)	30(2.87%)	40(3.1%)

NB. Other* means unprotected wells and rivers
Other** = Buried or burn it

4.3 Behavioral Factors

Of the total 245 urban and 1045 rural mothers/caregivers, 149(60.82%) urban and 471(45.07%) rural mothers breastfed their child for more than two years. From these children that breastfeed for more than two years, 31.14% were dead, but death of under five for those children that breastfed for less than a year was (38%). Considering delivery place, 790(61.24%) of rural mothers and 115 (46.94%) of urban mothers gave birth at home. Death of children was higher when mothers' gave birth at home (72.46%) than when it was in a health center (27.54%).

Health care outside home for sick children was sought for 166(67.76%) urban and 504(48.23%) rural children. Perception that illness was not serious was the main reason for the failure of taking children to health center for 49% urban and 76% rural children.

Two hundred seven (84.49%) urban and 689(65.93%) rural children were fully vaccinated, and 5.31% of urban and 10.62% rural children were not vaccinated at all. Of the total 167 under five deaths occurring in the study area, 27 (16.17%) children were not vaccinated at all.

The majority of urban mothers 213(86.94%) had more than one ANC visit during pregnancy than rural mothers 475(45.45%) (Table 4).

Table 4 Behavioral variables among urban and rural residents and U5 mortality in Gondar Zuria Woreda (Maksegnit) September 2011

Variables	Urban (n=245) No (%)	Rural (n=1045) No (%)	both urban & Rural U5 death(n= 167)
Breast feeding (Year)			
<1	35(14.29%)	187(17.89%)	65(38.92%)
1 -2	61(24.89%)	387(37.03%)	50(29.94%)
> 2	149(60.82%)	471(45.07%)	52(31.14%)
ANC			
Yes	213(86.94%)	475(45.45%)	67(40.12%)
No	32(13.06%%)	570(54.55%)	100 (59.88%)
Vaccination status:			
Full	207(84.49%)	689(65.93%)	91 (54.49%)
Partial	25(10.2%)	245(23.44%)	49 (29.34%)
Not at all	13(5.31%)	111(10.62%)	27 (16.17%)
Delivery:			
Health center	130(53.06%)	255(24.4%)	46(27.54%)
Home	115(46.94%)	790(75.6%)	121(72.46%)
Treatment place			
Traditional	3(1.22%)	161(15.41%)	27(16.17%)
Health center	176(71.84%)	788(75.41%)	129(77.25%)
Private clinic /Drug shop	66(26.94%)	96(9.19%)	11(6.59%)
Reasons for not taking children to the health center when sick			
Lack of money	84(34.28%)	23(2.2%)	5(2.99%)
Illness was not serious	120(48.98%)	979(93.65%)	151(90.42%)
Lack of knowledge	23(9.39%)	31(3%)	6(3.59%)
Other*	18(7.35%)	12(1.15%)	5(2.99%)
Hand washing with soap:			
Always	161(66.94%)	500(47.85%)	90(53.89%)
Sometimes	84(33.06%)	545(52.15%)	77(46.11%)

4.4 Socio-demographic, Environmental and Behavioral factors

Simple (binary) and logistic regression was used to identify the factors that affect under five mortality and the dichotomous variable was defined as 1= a child who was dead: 0= the child who was alive. Coefficients were expressed as crude and adjusted OR relative to the reference group.

4.4.1. Socio-demographic factors

Table 4 presents selected socio-demographic characteristics of the households in relation to under-five mortality. From the socioeconomic variables studied, under five mortality was significantly associated with both mothers' and fathers' education in the bivariate and multivariate logistic regression. The overall effect of the selected socio-demographic variables (Table 5), behavioral and environmental variables (Table 6) was added together and their effect was assessed in the multivariate analysis.

From the socio-demographic variables entered in the analysis, mothers' education, residence of parents, monthly income, number of children in a house, length of breastfeeding, fathers education, frequency of hand washing, fathers work resisted and become significantly associated with under five mortality in the multivariate analysis. The odds of a child born to illiterate mothers' was about 6 times higher than those who were born to mothers that were secondary and above [AOR: 6.16, 95% CI (2.21, 17.19)]. Fathers' education was also found to be significantly associated with under five mortality in the multivariate analysis [(AOR: 2.03, 95% CI (1.13, 3.64)]. Even though fathers work was not associated with under five mortality in the bivariate analysis, it was found to be significantly associated with under five mortality in the multivariate analysis.

Table 5: Selected Household's Socio-demographic Characteristics in relation to U5M and multivariate analysis Gondar Zuria Woreda (Maksegnit), September, 2011.

Variable	Death of a child Yes (n=167)	No (n=1123)	Crude OR 95% CI	Adjusted OR 95%CI
Mother's Education				
Illiterate	125	596	2.97(1.60, 5.50)**	6.16(2.21, 17.19)**
Primary	30	357	1.19(0.595, 2.38)	1.37(0.46, 4.13)
Secondary+	12	170	**1.0**	**1. 0**
Mother's age				
<20	82	414	1.44(0.74, 2.82)	2.52(0.75, 8.47)
20-35	74	629	0.86(0.44, 1.68)	0.92(0.28, 3.08)
36-49	11	80	**1.0**	**1. 0**
Parents Income				
100-500	84	152	6.17(3.23, 11.79)	14.7(4.6, 46.7)***
501-1000	43	438	1.09(0.56, 2.14)	3.20(1.04, 9.84)*
1001-2500	28	399	0.78(0.39, 1.58)	1.30(0.42, 4.05)
2501-5000	12	134	**1.0**	**1. 0**
Father's Education				
Illiterate	105	457	2.47(1.76, 3.45)	2.03(1.13, 3.64)*
Literate	62	666	1. 0	1. 0
Mother's occupation				
House wife	143	977	1. 0	
Gov'nt Employed	14	80	1.19(0.66, 2.17)	
Other@	10	66	1.09(0.48, 2.46)	
Father's occupation				
Farmer	129	846	0.97(0.58, 1.63)	4.54(2.07, 10)***
Merchant	19	156	0.78(0.39, 1.53)	3.74(1.71, 8.2)**
Government Emp	19	121	1.0	1. 0
Residence				
Urban	5	240	1.0	1. 0
Rural	162	883	8.81(3.58, 21.69)	16.2(3.5, 74.6)***
Number of children				
0-3 year	30	454	1. 0	1. 0
4-6 year	56	507	1.67(1.05, 2.66)	3.3(1.51, 7.1)**
7 +	81	162	7.57(4.79, 11.94)	24.4(10.20, 58.2)***
Number of deliveries in the last 5 years				
1	49	369	1.0	
2	81	652	0.94(0.64, 1.36)	
3	37	102	2.73(1.69, 4.41)	
Death of previous sibling				
Yes	59	1088	0.02(0.01, 0.03)	0.01(0.01, 0.03)***
No	108	35	1.0	1. 0

Note: SB small scale business, @ =selling beer, Small business *=0.01<p< 0.05 ** =p< 0.01, *** =p<0.001, Emp=employer

4.4.2 Behavioral and Environmental Characteristics

Table 6 Behavioral and Environmental variables in relation to U5M in multivariate analysis Gondar Zuria Woreda (Maksegnit), September, 2011

Variables		Child death		Crude OR	Adjusted OR
		Yes (n= 167)	No (n=1123)	95% CI	95% C I
Breast feeding (year)					
	<1	65	157	4.52(3.02, 6.78)	2.62(1.35, 5.1)**
	1 -2	50	398	1.37(0.91, 2.07)	0.64(0.33, 1.2)
	> 2	52	568	1.0	1. 0
ANC	Yes	67	621	1.0	1. 0
	No	100	502	1.84(1.34, 2.57)	0.46(0.25, 0.8)*
Vacc. status: Full		91	805	1.0	
	Partial	49	221	1.96(1.34, 2.86)	
	Not	27	97	2.46(1.53, 3.97)	
Delivery: H. center		46	339	1.0	
	Home	121	784	1.14(0.79, 1.64)	
Treatment place					
	Traditional	27	137	1.39(0.89, 2.18)	
	Health center	140	986	1.0	
Reasons for not taking children to the health center when sick					
Lack of money, knowl		16	175	1.0	
Illness was not serious		151	948	1.74(1.02, 2.99)	
Latrine availability:					
	Yes	133	892	1.0	
	No	34	231	1(0.66, 1.48)	
Freq Hand washing					
	always	90	571	1. 0	1. 0
	Some times	77	552	1 (0.6, 1.2)	0.51(0.3, 0.9)*

Note Freq = frequency, *=0.01< p<0.05, ** = p< 0.01,***=0.001, H=health, know=knowledge

5. Discussion

The rates of under-five mortality in Africa, especially in Sub Saharan Africa are staggering. In countries like Sierra Leone, Niger and Angola one-quarter to one-third of children die before reaching the age of five. In these countries U5 mortality was the highest in the world. The predominant causes of infant and under-five deaths in sub-Saharan Africa continue to be malaria (21%), pneumonia (19%), neonatal illnesses (12%), and diarrhea (11%) (2).

Studies in Tanzania has also shown that most child deaths were due to malaria, pneumonia, diarrhea, as well as HIV/ AIDS (23).

These findings were in line with the present study; where there were 167 U5 deaths per 1290 live births, which was equivalent to 130 deaths per 1000 live births. These deaths were due to malaria 48(28.74%), diarrhea 45(26.95%), respiratory infections 22(13.17%), pneumonia 18(10.78%) and others 34(20.36%) which were due to TB, HIV, Car and Fire accident etc. As it was shown in this study, the main contributing factor for the deaths of these children was the perception that illness was not considered serious by the parents 151(90.41%), as a result, sick children were not taken to the health center on time to get the necessary medication.

According to 2005 EDHS, in the Amhara region, there were 154 U5 deaths per 1000 live births and it was 123 per 1000 for the country. Compared to 2005 EDHS, the present study has shown a slight decrement in U5 mortality in the study area which might be due to increasing awareness of mothers/caregivers about child care (proper feeding, sanitation, increased health seeking behavior like vaccination etc). In this study knowing the causes of death was difficult because vital registration systems were not well documented as it was observed in the study area, so causes of death information comes from mothers/caregivers (verbal autopsy).

In this study, considering mother's education, under five mortality rate was highest for the children of illiterate mothers [AOR: 6.16, 95% CI (2.21, 17.19)] compared with children whose mother's educational level was secondary and above. This might be due to the fact that literate mothers better care their children, which means: there might be proper feeding of the child, they may recognize the symptoms of diseases early and took them to health centers quickly compared with illiterate mothers. A similar study done in Bangladesh, the results indicated that the child mortality rate was highest (1.64%) for the children of illiterate mothers and lowest (0.54%) for the children whose mother's educational level was secondary and above (22). Still another study done in Eastern Mediterranean region has also shown that there was a significantly increased risk of infant death among illiterate mothers [AOR 1.72, 95% CI (1.42, 2.08)] compared with literate mothers (32). However, another study made in Kenya indicated that maternal education was not significantly associated with U5 mortality [AOR: 0.91, 95% C I (0.67, 1.25)](28). This contradictory result might be attributed to cultural differences in people living in different parts of the world.

In this study, fathers' education was found to be significantly and independently an associate factor for under five mortality [AOR: 2.03, 95% CI (1.13, 3.64)]. Among the total deaths occurred in this study, the highest numbers 105(62.87%) were from illiterate fathers and only 3(1.8%) was for fathers' whose educational level was secondary and above.

This might be due to the fact that literate fathers may have jobs with better salaries. So children of these fathers might receive better nourishment, sanitation and treatment when they were sick compared with children of illiterate fathers. A similar study made in Bangladesh has shown that highest number of deaths (63.3%) was observed for the illiterate father and the lowest number of deaths (3.8%) was observed for the father whose educational level was high school and above. Father's level of education has been regarded as a source of income and wealth status of the household in Bangladesh. It was likely that higher educated

people belong to higher economic class (21). This result shows that child mortality sharply decreases as the father's educational level increases.

Even though, there was no significant association between mothers age at birth and under five mortality in this study [AOR: 2.52, 95% CI (0.75, 8.47)], the highest number of deaths 82 (49.1%) occurred in young mothers (<20 years) compared with those that were in the age group 36-49 years old 11(6.59%). This might be due to the fact that the reproductive system of young mothers has not matured sufficiently to produce strong, normal weight babies. It was also likely that the increased risk of infant death to the younger mother may be due to biological incompetence of early childbearing. However, a similar study in India shows that maternal age at birth was the most significant factor affecting infant mortality. Children born to young mothers (<20 years) were at a significantly greater risk of infant mortality; they were three times as likely to die as children born to mothers over 20 years of age). This result was in line with other findings done in different regions of the world (13, 21, 24, and 25). Absence of association of maternal age at birth and under five mortality in this study might be due to small sample size or high illiteracy rate and low income of parents might be other reasons for the death of children in the area irrespective of the age of mothers.

Children born to fathers who were farmers were more likely to die compared with those that were born to fathers that were government employers, [AOR: 4.54, 95% CI (2.07, 9.99)]. This might be due to the fact that employed fathers may be well informed about child care, recognize the signs symptoms of disease early and take their children to the health center when they were sick, mostly employed fathers may live in areas where access to health facility was available. Farmers in our situation might give less attention to child care, so that more child deaths occurred in these communities.

Considering deliveries made next to death of previous sibling, the results also show that children whose previous sibling died experienced a lower risk of death: [(AOR: 0.012, 95% CI 0.01, 0.03)]. This might be due to the fact that mothers may take great care to their children due to fear of death. However a study made

in India has shown that children of mothers whose previous child had died in infancy were at a significantly greater risk of dying than children born to mothers without such a history, irrespective of socio-economic or other demographic settings. This might be due to biological conditions such as hereditary disease, birth trauma due to small pelvis or prematurely delivery (13).

Considering maternal occupation, there was no association between under five mortality and mother's occupation [AOR: 1.19, 95% C I, (0.66, 2.17)]. But, among the total deaths occurred in the study area, 143(85.63%) deaths were registered in mothers which were housewives. Of these, 957(74.19%) house wives lived in rural area whereas 163(12.64%) of them lived in urban areas. Being housewives, especially in rural areas of our country means that mothers may not have enough money at hand to provide better health care to their sick children. They might also be involved in the farm, so that they may not get enough time to care their children. Still another reason could be since the majority of mothers were illiterate; they would not take sick children to health centers for treatment. This finding was in line with a study made in Bangladesh. In Bangladesh, the incidence of infant and child mortality was higher among housewives than that of employed women (27).

A similar study done in Kenya concerning maternal occupation and under five mortality, the result showed that mothers who were involved in small scale businesses had higher infant and child mortality levels than those on salaried employments. This might be due to the fact that mothers who were salaried have a specified number of hours within which they work and go back home early enough to care for the children. But Mothers who participate in small-scale businesses might spend very little time on child rearing and domestic work so that their children were less likely to receive care and would be vulnerable to risks including death (31, 32).

However, in another study made in India the result has shown that under five mortality was higher in employed mothers than house wives. Children of employed mothers were more likely to die than children of house wives because

of the fact that employed mothers might not have enough time to care their children including breastfeeding, keeping sanitation compared with housewives (18). These contradictory results concerning maternal occupation and under five mortality were attributed to differences in culture, socio economic conditions in those areas.

Similarly, a study in Nigeria (4) reveal that mother' s work outside the home in non-white collar occupations was associated with higher child mortality, in particular, women working in farming and the informal economic sectors have the highest mortality, due to the very low income they earn and to reduced devotion to child care.

In this study, living in urban areas was associated with lower risk of under five mortality. Children living in rural area was approximately 16 times at risk of death compared to those children living in urban areas [AOR: 16.19, 95% CI (3.51, 74.61)]. Urban-rural differentials might be attributed to different health care services including higher coverage with immunization(84.5%, 66%), safe delivery of births(53%, 24%) and perception that illness of a child was not serious(48%, 94%) respectively.

In this study, there has been a significant association between number of children in the family and U5 death. Children born to mothers having 7 and more children were about 3 times more likely to die compared with mothers with children 3 or less [AOR: 3.26, 95% CI, (1.51, 7.04)]. This might be due to increasing effect of parity, increasing infectious risk through crowding, and reduced child care time. Similar research result has been documented in rural African communities (28).

In this study, there was a significant association between U5 mortality and length of breast feeding. Children who breastfed less than a year were about 2 times more likely to die compared with those children who breastfed for more than two

years [AOR: 2.62 95% CI,(1.35, 5.09)]. This might be due to its direct effect through its nutritional value which influences the health of the infant and thereby increases the chance of survival and indirectly also affect child survival through its influence on birth spacing. This result was in line with a study made in Egypt, Yemen and Tunisia (16). In these countries, prolonged breastfeeding was associated with reduced infant and child mortality.

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6. Strengths and Limitations of the Study

6.1. Strengths

Primary data was collected directly from mothers'/caregiver using structured questionnaire. Considering multiple factors that affect child health may help us to use the limited resources more effectively, by identifying the most important risk factors.

6.2. Limitations

Cause of death was determined by asking mothers/caregivers the signs and symptom of the disease which may not reflect the real causes of U5M in the study area.

7. CONCLUSION AND RECOMMENDATION

7.1 CONCLUSION

As it was shown in this study, the prevalence of under five mortality was 130 per 1000 live births. Compared with EDHS 2005, there was slight decrement in U5 mortality, but it was increased compared to the preliminary report of EDHS 2011(88 per 1000 live births) and this was not sufficient to meet the target set by MDG 4.

Education was the most influencing factor in differentiating the infant and child mortality levels within all the socioeconomic factors. Mother's and fathers' education seems to be directly related with the health of a child. There was no doubt that an educated mother can provide better care of child than the mother

with no education or a lower level of education. So it might be concluded that the risk of child mortality was low for children whose parents were educated.

Women with short intervals between two pregnancies have insufficient time to restore their nutritional reserves, a situation which was thought to adversely affect fetal growth. Mothers with three births in five years had about 26.62% death compared with a mother having one birth in five years (11.72%). Immunization of the children was an important factor that contributes to the child's chances of survival. More U5 deaths were observed in unvaccinated children.

Perception that illness was not serious was another factor for the death of most children in the study area. So mothers/caregivers should consider that any illness was serious which can result in the loss of lives of children.

Treatment place was also an important factor for child mortality. The result shows that both infant and child mortality was higher whose treatment places were traditional than health centers.
Place of delivery was also an important determinant of child mortality. Safe delivery was important to save the life of the child and the mother. Most of the deaths were occurred in deliveries made in home.

7.2 RECOMMENDATIONS

Based on the findings of the study the following recommendations are forwarded:

- Education of mothers should be the key target of regional and Woreda health officials as it is the most important socio economic factors to reduce under five mortality.
- Mothers/caregivers should be advised by Health extension workers to take their sick children to health centers to get appropriate treatment of major childhood diseases.
- There should be continual reminding of mothers by health extension workers on malaria prevention and treatments.

- Promoting the education of mothers on low-cost health measures like birth-spacing should be the task of health extension workers.
- Woreda Health Office and Regional Health Bureau should work in collaboration to reduce U5 mortality in the study area and to meet the target set by MDG 4.
- Further study has to be done incorporating reliable methods of cause of U5M.

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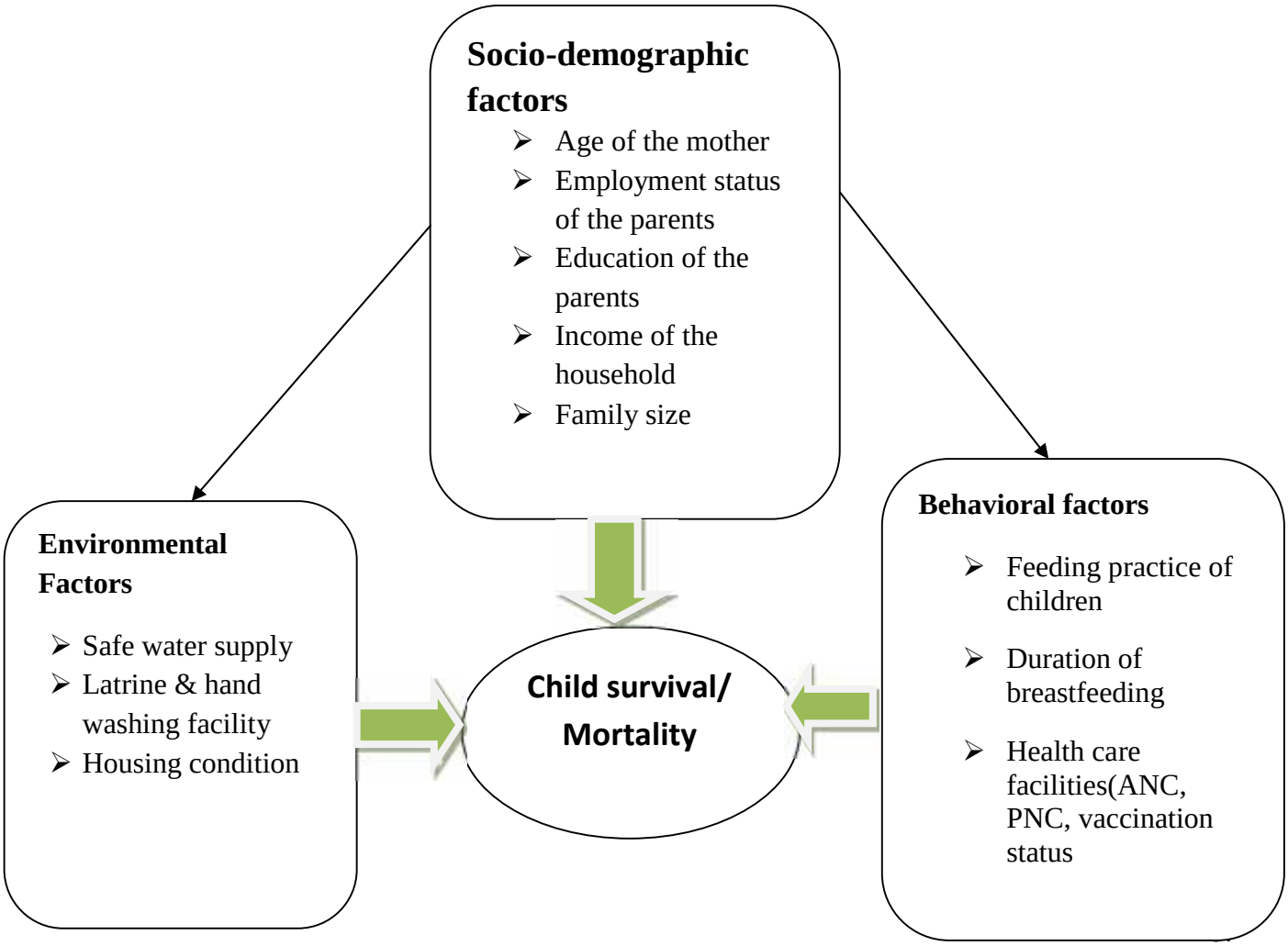
Annex I Conceptual Framework of the study



9. Annex II Questionnaire in English and Amharic

Questionnaire in English

School of Public Health
College of Medicine and Health Sciences
University of Gondar

Household Identification Code----------

Name of Kebeles----------

Verbal Consent

Hello! My name is …… I am here on behalf of Arega Yeshanew, student of the School of Public Health, College of Medicine and Health Sciences in the University of Gondar. He is conducting a research for the partial fulfillment of second degree on “Child survival and its determinant factors”. He has received permission from school of public health of the University of Gondar, District health office and respective health offices to conduct this study.

The main part of the study involves collecting information from you on child survival and factors affecting it and other related questions. You were selected due to chance from those who live in the district. We are requesting your permission to participate in an interview on issues related to child survival and its determinant factors. This information will help the policy makers and other responsible bodies as background to improve the health status of the children in the District. We assure you that whatever information you provide will only be used for the purpose of this research and will not be made available to anyone outside of the research team. Your willingness and support to respond the interview is very much appreciated. We also assure that the interview process will not bring any harm to you and your family. It is also your right to withdraw any time from the process when your feeling is uncomfortable with it. Please make (X) mark to indicate the respondents’ decision regarding participation in the study. a) Agree _____ b) Disagree_____

Interviewer name_____

Signature_____

Checked by supervisor: Name_____ Signature_____ Date_____

Result of interview: 1. Completed---------- 2. Incomplete----------Thank you!!

General information

1. identification number of the respondent_____ Kebele_____
2. Date of interview_____
3. Interviewer name _____
4. Supervisors who checked the questionnaire

   Name_____ Signature_____ Date_____

Questionnaire for child survival and its Determinant Factors

I. Socio-demographic characteristics

No	Questions	Possible responses	Code	Skip resp.
101	**Where is your residence?**	**Rural** **Urban**		
102	**What is yours religion?**	**1.Orthodox** **2. protestant** **3.Muslim** **4.other**		
103	What is your (Father's) level of education?	1.No education 2.Primary 3.Secondary+		

104	What is mothers education level	1. No education 2. Primary 3. Secondary+		
105	What is your marital status?	1.Married 2. divorced 3. husband dead		
106	What is your(Mother's) occupation?	1. Not working(housewife) 2.Working(government /non-government employer) 3 .others		
107	Who is the head of the family?	1. male 2. female		
108	What is your husband's occupation?	1.Farmer 2. government /non – government employer 3. merchant 3. other		
109	What is your monthly income of your family?	Specify in Birr/ month----------		
110	Have you got information about child care?	1.Yes 2.No		

111	If your answer to Q 110 is yes, where did you get the information?	1. from health extension workers 2. radio/Tv 3. others		
112	What is your age at birth?	1.< 20 years 2. 20-35 3. 36-49		
113	How many times did you give birth in the last five years?	1. One 2. Two 3. Three & above		
114	How is the Survival of previous child?	1. Alive 2. Dead		
115	If your answer to 114 is dead, cause of death	Specify----------		
116	At what time do you give birth after the death of the infant?	Specify----------		
117	What is the age of the child at death?	Specify----------		
118	How many children aged under five do you have?	1. One 2.Two		

		3. Three & above		
119	Number of children in the house	Specify------		
120	Sex children	1.male_____ 2. Female_____		
121	Where is delivery place	1.home 2.health center		
122	If your answer to 121 home reason	Specify_____		
123	Do you get ante natal care	1. Yes 2. no		
124	If your answer to 123 is yes for how many times	Specify_____		
125	If your answer to 123 is no, reason	Specify_____		
126	Do you get post natal care	1.yes 2.no		
127	Does your child dead in the last five years?	1. Yes 2. No		
128	If your answer to 127 is yes , how many	Specify_____		

129	If your answer to 127 is yes cause of death	Specify_____		
	II. Environmental Characteristics			
130	Do you have latrine	1. Yes 2. No		
131	Where do you dispose the waste matter(solid)	1. Open field 2. Pit 3. Use basket 4. other		
132	Do you wash your hand after toilet	1.yes 2.no		
133	If your answer to 130 is yes, frequency of use	1. Always 2. Sometimes		
134	Do you wash your hand with soap	1.yes 2. No		
135	If your answer to 134 is yes frequency	1. Always 2. sometimes		
136	Source of drinking water	1. tap water 2. protected spring 3. other		
Questions to be asked concerning children(III Behavioral characteristics)				
137	Does the child have Utilized Colostrums?	1. Yes 2. No		

138	What is the Duration of breastfeeding?	1. <1 year 2. 1-2 year 3. > 2 year		
139	Is your child vaccinated?	1.yes 2.No		
140	If your answer to no 139 is yes, what is the Immunization Status of the child?	1. Full 2. Partial 3. Not at all		
141	If your answer to 139 is no reason	Specify_____		
142	Is your child sick in the last 15 days?	1. Yes 2. No		
143	If your answer to 142 is yes cause of disease	Specify_____		
144	If your answer to 142 is yes, Where is the treatment place of the child?	1.Traditional 2.Health institution 3.drug shops and others		
145	Homemade interventions when the child is sick	Specify_____		
146	Reasons of not taking sick children to health Center	Specify_____		

የአማርኛ ቃለ መጠይቅ

የጎንደር ዩንቨርሲቲ የሕክምና እና ጤና ሳይንስ ኮሌጅ

የሕብረተሰብ ጤና አጠባበቅ ት/ቤት

የህፃናትን በህይወት መኖር ተፅእኖ የሚፈጥሩ ሁኔታዎች በጎንደር ዙሪያ ወረዳ ዉስጥ በሚገኙ የከተማእና የገጠ

ር ቀበሌ ነዋሪዎች ላይ ምርምር እና ጥናት ለማድረግ የሚያግዝ በአማረኛ የተዘጋጀ መጠይቅ ነዉ፡ ፡

የቤተሰቡ መለያ ኮድ ..... ቀበሌ.....

የፅሁፍ ስምምነት

ጤና ይስጥልኝ ፡ ፡ ስሜ .....ይባላል ፡ ፡ እዚህ የተገኘሁት አቶ አረጋ የሻነው ዳምጤ የተባሉትን በጎንደር ዩኒቨርስቲ የሕክምና ጤና ሳይንስ ኮሌጅ የሕብረተሰብ ጤና አጠባበቅ ት/ቤት የመጨረሻ አመት ተማሪ ወክዬ ነው ፡ ፡ አቶ አረጋ የሻነው በአሁኑ ጊዜ የህፃናትን በህይወት መኖር ተፅእኖ የሚፈጥሩ ሁኔታዎች በሚል ርዕስ ለሁለተኛ ድግሪ ማሟያ ጥናት እያደረጉ ነው ፡ ፡ ለዚህም ከጎንደር ዩኒቨርስቲ የሕክምና ጤና ሳይንስ ኮሌጅ የሕብረተሰብ ጤና አጠባበቅ ት/ቤት ከወረዳው ጤና ጥበቃ ጽ/ቤት እና ከሚመለከታቸው አካላት ይህን ጥናት እንዲያደርጉ ፈቃድ አግኝተዋል፡ ፡ የጥናቱ ዋና ተግባር በርስዎ የህፃናት አመጋገብና አስተዳደግ እንዲሁም የንፅህና አጠባበቅ እና በመሳሰሉት ጥያቄዎች ላይ መረጃ መሰብሰብ ነው፡ ፡ እርስዎ ለዚህ ቃለ መጠየቅ የተመረጡት በወረዳው ውስጥ ከሚገኙት ቤተሰቦች መካከል በደረሰዎት እጣ መሰረት ነው ፡ ፡ በመሆኑም የህፃናት አመጋገብና አስተዳደግ እንዲሁም የንፅህና አጠባበቅ ዙሪያ ቃለ መጠየቅ ላይ ፈቃደኛ ሆነው እንድትተባበሩን እንጠይቀዎታለን ፡ ፡ የሚሰጡት መረጃ ለህግ አውጪውና ለሚመለከታቸው አካላት የቀበሌችሁን ነዋሪዎች አግባብ የሆነ የህፃናት አመጋገብና አስተዳደግ እንዲሁም የንፅህና አጠባበቅ ላይ ማሻሻል ለሚፈልጉት በሙሉ እነደ መነሻ ሃሳብ (የጥናት ውጤት) ይሆናቸዋል ከዚህ ጋር አያይዘን ልንገልጽልዎ የምንፈልገው የሚሰጡት ማንኛውም ሃሳብ ጥናቱን ከሚያደርገው ቡድን ውጭ ለማንም አካል ተላልፎ የማይሰጥና በሚስጥር የሚጠበቅ መሆኑን ነው ፡ ፡ ለቃለ መጠይቁም ፈቃደኛ ሆነው ለሚሰጡን መረጃ ሁሉ ምስጋናችን የላቀ ነው የጥናቱ ሂደትም በርሶም ሆነ በቤተሰበዎ ላይ ምንም ችግር የማያመጣ መሆኑ ልንገልጽልዎ እንዎዳለን ፡ ፡ በቃለ መጠይቁ ላይ ፍላጎት ከሌለዎት በማንኛውም ጊዜ እራስዎን ማግለል እንደሚችሉ ልናሳውቅዎ እንፈልጋለን ፡ ፡

እባክዎትን የተጠያቂውን ፈቃደኛነት ለመግለጽ (×) ምልክት ይጠቀሙ፡ ፡

ሀ) ተስማምቷል (ታለች) ..... ለ) አልተስማማም(ችም) .....

የ ተጠያ ቂው ስ ም ..... ፊ ር ማ.....የ ጥ ና ቱ
ተ ቆ ጣጣሪ ስ ም ..... ፊ ር ማ.....የ ጥ ና ቱ
መጠይቅ ተ ጠ ና ቋ ል አ ል ተ ጠ ና ቀ ቀ ም ..... አ መ ሰ ግ ናለሁ

የአማርኛ ቃለ መጠይቅ

101. መኖሪያ ቦታ ዎ የት ነው? 1. ከተማ 2. ገጠር

102. ሀይማኖትዎ ምንድን ነው? 1.ኦርቶዶክስ ክርስትያን 2. ሙስላም 3.ፕሮቴስቆንት 4.ሌላ

103. የአባት የትምህርት ደረጃ ምንድን ነዉ? 1. ያልተማረ 2. ሙስከ አንደኛ ደረጃ ድረስ 3. ሁለተኛ ደረጃ ሙ ና ከዚያ በላይ

104. ዮ ሙ ና ት የትምህርት ደረጃ ምንድን ነዉ? 1. ያልተማረች
2. ሙስከ አንደኛ ደረጃ ድረስ 3. ሁለተኛ ደረጃ ሙ ና ከዚያ በላይ

105. የጋብቻ ሁኔታ 1.ያገባ 2.የፈታ 3. የሞተበት

106. ስራዎ (የኖ ሙ ት) ምንድን ነው? 1.የቤት ሙ መቤት 2.የመንግስት/ የግል ሰራተኛ 3. ሌላ

107. የቤተሰቡ ሃላፊ ማን ነው? 1.አባት 2. ቺናት

108. የአባት ስራ ምንድን ነዉ? 1.ገበሬ 2.የመንግስት/ የግል ሰራተኛ 3.ነጋዴ

109. ወርሃዊ ገቢዎ ምን ያህል ነዉ? ይጥቀሱ_____

110. ስለ ህፃናት ዕንክብካቤ ትምህርት አግኝተው ያውቃሉ? 1.አዎ 2.የለም

111. ለ110 መልስዎ አዎ ከሆነ የት? 1.ከጤና ሙያተኞች 2.ከሬድዮ/ ቲቪ 3.ሌላ

112. ሲወልዱ (ዮ ሙ ናት) ሙ ድሜዎ ስንት ነበር? 1. < 20 2. 20-35 3. 36-49

113. ባለፉት 5 አመት ስንት ጊዜ ወለዱ? 1. አንድ 2. ሁለት ጊዜ 3. ሶስትና ከዛ በላይ

114. አሁን ከለዎት ህጻን ልጅ በፊት የተወለደው በህይወት አለ? 1.አለ 2.የለም

115. የ114ኛው ጥያቄ መልስ የለም ከሆነ ሕጻኑ የሞተበትን ምክንያት ይጥቀሱ.....

116. ህጻኑ ከሞተብዎት በ| ላ በምን ያህል ጊዜ ውስጥ ወለዱ? ይጥቀሱ.....

117. ሕጻኑ ሲሞት ዕድሜው ስንት ˆ ንደነበር ይጥቀሱ.....

118. ˆ ድሜአቸው ከ5 አመት በኅ የሆኑ ስንት ልጆች አሉዎት?

1.አንድ 2.ሁለት 3.ሶስትና ከዚያ በላይ

119. በቤት ውስጥ ጠቅላላ የልጆች ቁጥር ስንት ነው? ይጥቀሰ----------

-120 . ጾታ *1. ወ--------- 2. ሴ----------*

121. ምጥ ሲመጣ የት ነው የሚወልዱት? 1. ሆስፒታል/ ጤና ጣቢያ 2.ቤት

122.የ121ኛው ጥያቄ መልስ ቤት ከሆነ ምክንያቱን ይሚለጹ.....

123. የቅድመ ወሊድ ህክምና ክትትል አድርገዋል? 1.አዎ 2.የለም

124. የ123ው ጥያቄ መልስ አዎ ከሆነ ለምን ያህል ጊዜ: ይጥቀሱ ----------

125.የ123ኛው ጥያቄ መልስ የለም ከሆነ ምክንያቱን ይግለፁ.....

126. ከወሊድ በ| ላ የህክምና አገልግሎት አግኝተዋል? 1.አዎ 2.የለም

127. ባለፉት 5 አመታት ልጅ ሞቶብዎት ያውቃል? 1 አዎ 2 የለም

128. የ127ኛው ጥያቄ መልስ አዎ ከሆነ ስንት? ይጥቀሱ.....

129. የ 127ኛው ጥያቄ መልሰዎ አዎ ከሆነ ምክንያቱን ይግለፁ----------

130. ደረቅ ቆሻሻ የት ነ ው የሚጥሉት? 1. ሜዳ ላይ 2. መቅበር

131. ሽንት ቤት አለዎት? 1.አዎ 2.የለም

132. ከሽንት ቤት መልስ ጅዎን በውሃ ይታጠባሉ? 1. አዎ 2.የለም

133. የ132ው ጥያቄ መልስ አዎ ከሆነ አጠቃቀምዎ

1. ሁል ጊዜ 2. አልፎአልፎ

134. ˆጅዎን ለመታጠብ ሳሙና ይጠቀማሉ? 1.አዎ 2.የለም

135. ለ133ኛው ጥያቄ መልስዎ አዎ ከሆነ፤ አጠቃቀመዎ : 1.ሁልጊዜ 2.አልፎ አልፎ

136. ለመጠጥ የሚሆን ውሃ የት ነው የምታገ ኙት? 1.ከጠጓ 2.ከተጠበቀ ምንጭ 3.ከሌላ

ህጻናትን በተመለከተ የሚጠየቁ ጥያቄዎች

137. ህጻኑ ወዲያው ˆንደተወለደ ግረን ጠብተል ወይ? 1.አዎ 2 የለም

138. ህጻኑን ጡት ማጥባት ያቆሙት በተወለደ በስንት ወሩ/አመት ነው?
ይጥቀሱ.....

139. ልጅዎ ተከትቦ ያውቃል? 1 አዎ 2 የለም

140. የ139ኛው ጥያቄ መልሰዎ አዎ ከሆነ የህጻኑ የክትባቱ ሁኔታ

1. ሙሉ በሙሉ የተከተበ 2.በከፊል የተከተበ 3.ምንም የልተከተበ
141. የ139ኛው ጥያቄ መልስ የለም ከሆነ ምክንያቱን ይጥቀሱ.....

142. ባለፉው 15 ቀን ውስጥ ልጅዎት ታሞ ያውቃል? 1. አዎ 2 የለም

143. የ142ኛው ጥያቄ መልስዎ አዎ ከሆነ፡ የህመሙን አይነት ይጥቀሱ----------

144. ሕጻኑ ሲታመም ቤት ውስጥ የሚደረግለት ፣ንክብካቤ ካለ፡ይጥቀሱ----------

145. ህጻኑ ሲታመም የት ነው የሚታከመው? 1. ክባህል ሃኪም 2. ክጤና ድርጅት 3. መድሃኒት ቤትና ሌላ ቦታ

146. ህጻናት ሲታመሙ ሃኪም ቤት የማይታከሙት ለምን ይመስንነው? ይጥቀሱ----------

Annex II- Information Sheet and Consent form

Information sheet and consent form In English

Title of the Research Project: - Assessment of the magnitude and determinant factors affecting child survival in rural and urban communities of mothers Gondar Zuria District.

Name of Principal Investigator: - Arega Yeshanew.

Name of the Organization:-University of Gondar College Of Medicine and Health Sciences, School Of Public Health.

Name of the Sponsor Organization: - self sponsored

Introduction: - This information sheet and consent form is prepared for households of some rural and some urban communities of mothers who give birth during the last five years. The research project group includes six third year clinical nurse students, one supervisor, and two advisors from University Gondar.

Purpose of the Research Project:

The main aim of the research project is to assess the magnitude and the determinant factors in some rural and urban community mothers of Gondar Zuria District as this will provide valuable information to health care planners to design evidence based policy to increase the survival of children.

Procedure: In order to accomplish the project, we invite you to take part in our project. If you are willing, you need to understand and sign the consent form .Then, you will be requested to take the questionnaire and respond accordingly. Study participants are households or mothers who give birth during the study period.

Risk and /or Discomfort: By participating in this research project you may feel some discomfort especially on scarifying your time (about 15-20 minutes) otherwise, no risk so your response provide an important input to show the gap and means to improve child survival

Benefits:

If you are participating in this research project, the output of the study will have both direct and indirect benefits to you and your country because working with children is investment in the future.

Incentives/Payments for Participating:

You will not be provided any incentives or payment to take part in this project.

Confidentiality:

The information collected from this research project will kept confidential and information about you that will be collected by this study will be stored in a file, without your name, but a code number assigned to it and it will not be revealed to anyone except the principal investigator and will be kept locked with key.

Right to Refusal or Withdraw:

You have the full right to refuse from participating in this research. (You can choose not to respond some or all the questions) and this will not affect you from getting any kind of health related service within the district.

Person to contact:

This research project was reviewed and approved by the ethical committee of the University of Gondar. If you want to know more information you can contact the committee through the address below. If you have any question you can contact any of the following individuals and you may ask at any time you want.

1.Professor Yigzaw Kebede:- University of Gondar gkyigzaw@yahoo.com

2. Bickes Destaw (BSC,MPH):- University of Gondar bikesdes@yahoo.com

3. Arega Yeshanew: - Abyssinia Medical College Gondar Tel: mobile +0918120513

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E-mail:-arega4239@yahoo.com

የ መረጃና የ ስ ምምነ ት ውል ቅፅ

<u>የ ምር ምሩ /ጥና ቱን ር ዕ ስ</u>

የ መረጃና የ ስ ምምነ ት ውል ቅፅ

<u>የ ምር ምሩ /ጥና ቱን ር ዕ ስ</u> የ ህ ፃ ና ትን በ ህ ይወት መኖር ተ ፅ እ ኖ የ ሚ ፈ ጥሩ ሁ ኔ ታ ዎች በ ጎ ን ደ ር ዙ ሪ ያ ወ ረ ዳ ውስ ጥ በ ሚገ ኙ ቀ በ ሌ ዎች ላ ይ ለ መ ዳ ሰ ስ ነ ው፡ ፡

የ ዋ ና ተ መ ራ ማ ሪ ው ስ ም፡ አ ረ ጋ የ ሻ ነ ው

የ ድ ር ጅ ቱ ስ ም፡ ጎ ን ደ ር ዩ ኒ ቨ ር ሲ ቲ ህ ክ ምና ና ጤና ሳ ይ ን ስ ኮ ሌ ጅ የ ህ ብ ረ ተ ሰ ብ ጤና አ ጠ ባ በ ቅ ት /ቤ ት

ወ ጪ ው ን የ ሚ ሸ ፍ ነ ው፡ በ ግ ል

መ ግ ቢ ያ ፡ ይ ህ የ መ ረ ጃ ና የ ስ ምምነ ት ውል ቅ ፅ የ ተ ዘ ጋ ጀ ው እ ር ስ ዎ ተ ሳ ታ ፊ እ ን ዲ ሆ ኑ በ ተ ጋ በ ዙ በ ት በ ምር ምር ቡ ድ ኑ የ ሚ ካ ሄ ደ ው ን ጥ ና ት አ ላ ማ በ ተ መ ለ ከ ተ መ ግ ለ ጫ ለ መ ስ ጠ ት ነ ው፡ ፡ የ ምር ምር ፕ ሮ ጀ ክ ቱ ዋ ና ዓ ላ ማ የ ህ ፃ ና ትን በ ሕ ይ ወ ት መ ኖ ር የ ሚ ጎ ዱ እ ን ዲ ሁ ም የ ን ፅ ህ ና አ ጠ ባ በ ቅ እ ና በ መ ሳ ሰ ሉ ት ጥ ያ ቄ ዎ ች ዙ ሪ ያ በ ጎ ን ደ ር ዙ ሪ ያ ወ ረ ዳ ውስ ጥ በ ሚገ ኙ ቀ በ ሌ ዎ ች ለ ይ መ ዳ ሰ ስ ነ ው፡ ፡ ይ ህ መ ረ ጃ ደ ግ ሞ ለ ተ ለ ያ ዩ ህ ላ ፊ ዎ ች ት ክ ክ ለ ኛ የ ሆ ነ ለ ች ግ ሩ መ ፍ ት ሄ ለ መ ፈ ለ ግ እ ና እ ቅ ድ ለ ማ ዉ ጣ ት ያ ገ ለ ግ ላ ቸ ዋ ል ፡ ፡

የ ጥ ና ት ፕ ሮ ጀ ክ ቱ የ ሚ ካ ሄ ድ በ ት ም ክ ን ያ ት ፡ የ ጥ ና ቱ ዓ ላ ማ የ ህ ፃ ና ት ን በ ሕ ይ ወ ት መ ኖ ር የ ሚ ጎ ዱ እ ን ዲ ሁ ም የ ን ፅ ህ ና አ ጠ ባ በ ቅ እ ና በ መ ሳ ሰ ሉ ት ጥ ያ ቄ ዎ ች ዙ ሪ ያ በ ጎ ን ደ ር ዙ ሪ ያ ወ ረ ዳ ው ስ ጥ በ ሚ ገ ኙ የ ከ ተ ማ እ ና የ ገ ጠ ር ቀ በ ሌ ዎ ች ለ ይ ለ መ ዳ ሰ ስ ነ ው ፡ ፡

አ ተ ገ ባ በ ር ፡ ይ ህ ጥ ና ት በ ጎ ን ደ ር ዙ ሪ ያ ወ ረ ዳ ዉ ስ ጥ በ ሚ ገ ኙ የ ከ ተ ማ እ ና የ ገ ጠ ር ቀ በ ሌ ነ ዋ ሪ ዎ ች ን ስ ለ ሚ ያ ካ ት ት እ ር ስ ዎ ፈ ቃ ደ ኛ ከ ሆ ኑ ለ ዚ ህ ጥ ና ት ተ መ ር ጠ ዋ ል ፡ ፡ ስ ለ ሆ ነ ም እ ር ስ ዎ በ ዚ ህ የ ጥ ና ት ፕ ሮ ጀ ክ ት ላ ይ ተ ሳ ታ ፊ እ ን ዲ ሆ ኑ በ አ ክ ብ ሮ ት እ ን ጠ ይ ቃ ለ ን ፡ ፡ እ ር ስ ዎ በ ዚ ህ ጥ ና ት ለ መ ሳ ተ ፍ ፈ ቃ ደ ኛ ከ ሆ ኑ በ ጣ ም ደ ስ ተ ኞ ች ስ ን ሆ ን እ ር ስ ዎ የ ጥ ና ~ን ዓ ላ ማ በ ግ ል ፅ እ ን ዲ ረ ዱ እ ና የ ስ ም ም ነ ት ው ሉ ን እ ን ዲ ፈ ʻ መ ል ን እ ን ፈ ል ጋ ለ ን ፡ ፡ በ ዚ ህ መ ሰ ረ ት ም ለ መ ረ ጃ ሰ ብ ሳ ቢ ዎ ቹ የ ሚ ጠ ይ ቁ ዎ ት ን መ ረ ጃ በ መ ስ ጠ ት እ ን ዲ ተ ባ በ ሩ ን በ አ ክ ብ ሮ ት እ ን ጠ ይ ቃ ለ ን ፡ ፡

ተ ሳ ታ ፊ ዎ ች በ መ ጠ ይ ቁ መ ሰ ረ ት መ ረ ጃ ዎ ች ን የ ሚ ሰ ጡ ሲ ሆ ን በ ተ ሳ ታ ፊ ዎ ቹ የ ሚ ሰ ጡ መ ረ ጃ ዎ ች እ ና የ ሚ ገ ኘ ው ው ጤ ት በ መ ሉ በ ምስ ጢ ራ ዊ ቁ ጥ ር ዘ ዴ በ ምስ ጢ ራ ዊ ነ ት የ ሚ ጠ በ ቅ ስ ለ ሆ ነ ማ ን ኛ ው ን ም ዓ ይ ነ ት ሰ ው እ ር ስ ዎ የ ሰ ጡ ን መ ል ስ ሊ ያ ው ቀ ው አ ይ ች ል ም ፡ ፡

ስ ለ ሆ ነ ና የ ህ ፃ ና ት ን በ ሕ ይ ወ ት መ ኖ ር የ ሚ ጎ ዱ እ ን ዲ ሁ ም የ ን ፅ ህ ና አ ጠ ባ በ ቅ ላ ይ የ ሚ ደ ረ ገ ው ን እ ን ቅ ስ ቃ ሴ **ለ ማ ሻ ሻ ል** ስ ለ ሚ **ያ ገ ለ ግ ል** ነ ው ። **በ ዚ ህ** ጥ ና ት ተ ሳ ታ ፊ በ መ ሆ ን ዎ ም **ም ን ም አ ይ ነ ት ጉ ዳ ት <u>ሊ ገ ጥ ም የ ሚ ች ል ች ግ ር ና/ወ ይ ም አ ለ መ መ ቸ ት</u>**

በ ዚ ህ ጥ ና ት ላ ይ ተ ሳ ታ ፊ በ መ ሆ ን አ ን ዳ ን ድ አ ለ መ መ ቸ ት ይ ኖ ራ ል ብ ለ ዉ ሊ ያ ስ ቡ ይ ች ላ ሉ በ ተ ለ ይ ም ደ ግ ሞ ጊ ዜ ዎ ን በ መ ሻ ማ ታ ች ን (10-15 ደ ቂ ቃ) ነ ገ ር ግ ን እ ር ስ ዎ የ ሚ ሰ ጡ ን መ ል ስ ጠ ቃ ሚ ግ ባ ት አ ይ ደ ር ስ ብ ዎ ት ም ።

<u>ጥ ቅ ሞ ች ፡</u> እ ር ስ ዎ በ ዚ ህ ጥ ና ት ተ ሳ ታ ፊ በ መ ሆ ን ዎ በ ቀ ጥ ታ ሊ ያ ገ ኙ ት የ ሚ ች ሉ ት ጥ ቅ ም ላ ይ ኖ ር ይ ች ላ ል ነ ገ ር ግ ን የ እ ር ስ ዎ ተ ሳ ት ፎ የ ህ ፃ ና ት ን በ ሕ ይ ወ ት መ ኖ ር የ ሚ ጎ ዱ እ ን ዲ ሁ ም የ ን ፅ ህ ና አ ጠ ባ በ ቅ ላ ይ ያ ለ ው ን ክ ፍ ተ ት ለ ማ ሳ የ ት እ ና ት ክ ክ ለ ኛ የ ሆ ነ የ መ ፍ ት ሄ ሃ ሳ ብ **ባ** ማ ቅ ረ ብ ይ ጠ ቅ ማ ል ፡ ፡

<u>ለ መ ሳ ተ ፍ ጥ ቅ ማ ጥ ቅ ም ፡</u> እ ር ስ ዎ በ ዚ ህ ጥ ና ት ተ ሳ ታ ፊ በ መ ሆ ን ዎ ም ን ም ዓ ይ ነ ት ማ በ ረ ታ ቺ ያ ወ ይ ም ክ ፍ ያ አ ይ ሰ ጥ ዎ ት ም ፡ ፡

ም ስ ጢ ራ ዊ ነ ት ፡ ለ ዚ ህ የ ጥ ና ት ፕ ሮ ጀ ክ ት የ ሚ ሰ በ ሰ ብ ማ ን ኛ ው ም አ ይ ነ ት መ ረ ጃ በ ምስ ጢ ራ ዊ ነ ት የ ሚ ጠ በ ቅ ሲ ሆ ን እ ር ስ ዎ ን በ ተ መ ለ ከ ተ የ ሚ ሰ በ ሰ በ ው መ ረ ጃ የ እ ር ስ ዎ ስ ም ሳ ይ ፃ ፍ በ ት ነ ገ ር ግ ን ምስ ጢ ራ ዊ ቁ ጥ ር ተ ሰ ጥ ቶ ት በ ፋ ይ ል ው ስ ጥ የ ሚ ቀ መ ጥ ይ ሆ ና ል ፡ ፡ እ ን ዲ ሁ ም መ ረ ጃ ው ከ ጥ ና ቱ ዋ ና }S^T] እ ና ረ ዳ ቶ ቹ በ ስ ተ ቀ ር ለ ሌ ላ ለ ማ ን ኛ ው ም አ ይ ነ ት ሰ ው ግ ል ፅ አ ይ ሆ ን ም ፡ ፡

ከጥናቱ ያለመሳተፍ ወይም የማቋረጥ መብት፡በዚህ ጥናf ያለመሳተፍ ሙሉ በሙሉ የተጠበቀ መብት አለዎት፡፡ ለጥያቄዎቹ በሙሉም ሆነ በከፊል መልስ ያለመስጠት መብት አላችሁ፡፡ ይህ ደግሞ ማንኛውም ዓይነት በአካባብዎት የሚሰጡ ግልጋሎቶችን ከማግኘት የሚያግድዎት አይሆንም፡፡ እንÇ=ሁም በማንኛውም በፈለጉ ሰዓት ማንኛውንም መብትዎን ሳያጡ የማቋረጥ ሙሉ መብት አለዎት፡፡

ሊገናኙዋቸው የሚችሉ ሰዎች

የሚሰጡግልጋሎቶችን ከማግኘት የሚያግድዎት አይሆንም፡፡ እንÇ=ሁም በማንኛውም በፈለጉ ሰዓት ማንኛውንም መብትዎን ሳያጡየማቋረጥ ሙሉ መብት አለዎት፡፡

ሊገናኙዋቸው የሚችሉ ሰዎች

ይህ የምርምር ፕሮጀክት በጎንደር ዩኒቨርሲቲ የስነ ምግባር ኮሚቴ ተከልሶ የሚፀድቅ ይሆናል፡፡ የበለጠ መረጃ ማግኘት የሚፈልጉ ከሆነ ኮሚቴውን በሚከተለው አድራሻ ማግኘት ይችላሉ፡፡ የትኛውም ዓይነት ጥያቄ C=ኖርዎት ከዚህ ቀጥሎ የተጠቀሱትን ግለሰቦች ማግኘትና በማንኛውም ጊዜ መጠይቅ ይችላሉ፡፡

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DECLARATION

I, the undersigned senior MPH student declare that this thesis is my original work in partial fulfillment of the requirement for the degree of Masters of Public Health.

Name _____

Signature_____

Place of Submission: School of Public Health, College of Medicine and Health Sciences,

University of Gondar.

Date of Submission_____

This thesis work has been submitted for examination with my/our approval as university advisor(s).

Advisors

Name	Signature
1._____	_____
2._____	_____